

REMARKS

In the most recent Office Action, claims 1 and 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Skillicorn et al. (U.S. Patent No. 5,077,771) in view of Yahata et al. (U.S. Patent No. 4,734,924). Presented for the Examiner's review and consideration are newly added claims 7 and 8.

Applicants have amended claims 1, 4 and 5 to differently recite the invention. In addition, Applicants have canceled claim 3. Claims 1, 4-5 and newly added claims 7-8 are now pending. Specifically, Applicants have amended claims 1, 4 and 5 to recite an X-ray generating apparatus comprising, *inter alia*, a cathode current detecting means and a grid voltage control means, wherein the cathode current detecting means has a cathode current detecting resistor and wherein the grid voltage control means has an operational amplifier having one input terminal for inputting a voltage generated by the cathode current detecting resistor.

Applicants traverse the rejections based on Skillicorn et al. and Yahata et al., as set forth in the most recent Office Action and applied to the pending claims, for at least the following reasons. Applicants submit that these references, whether taken alone or in combination, do not disclose or suggest any of Applicants' claimed combinations thereby failing to establish a *prima facie* case of obviousness. More specifically, Skillicorn et al. and Yahata et al., taken alone or in combination, do not disclose or suggest Applicant's claimed combination wherein the grid voltage control means has an operational amplifier having one input terminal for inputting a voltage generated by a cathode current detecting resistor.

Contrary to the Examiner's assertion on page 5, lines 1-2 of the Detailed Action, Skillicorn et al. does not disclose, teach or suggest a cathode current detecting resistor for detecting the cathode current as required in amended claims 1, 4 and 5. Instead, Skillicorn et al. discloses a cathode bias resistor network 188 for establishing a positive voltage. (*See Skillicorn et al.*, col. 10, 10-18). Furthermore, amended claims 1, 4 and 5 require an operational amplifier having one input terminal for inputting a voltage generated by the cathode current detecting resistor. Neither of the input terminals of the operational amplifier 260 of Skillicorn et al. is electrically connected to the cathode bias resistor network 188. Skillicorn et al. and Yahata et al., taken alone or in combination, fail to disclose the cathode current detecting resistor and operational amplifier arrangement as claimed in claims 1, 4 and 5. Therefore, Skillicorn et al. and Yahata et al. fail to teach or suggest all the limitations of amended claims 1, 4 and 5, and thus, a *prima facie* case of obviousness has not been established. MPEP § 2143. Applicants respectfully request reconsideration of and withdrawal of the rejection of claims 1, 4 and 5.

Claims 7 and 8 are presented for the Examiner's review and consideration. No new matter is believed to have been added and each claim is believed to be supported by the specification as originally filed. Support for claim 7 may be specifically found at page 26, lines 7-16; page 26, line 23 to page 27, line 6; and page 28, line 2-9. Claims 7 and 8 each depend from independent claim 1 and accordingly should be allowable for at least the reasons provided above.

For at least the foregoing reasons, Applicants submit that all of the pending claims patentably distinguish over the applied references to Skillicorn et al. and Yahata et al., whether taken alone or combined in the manner suggested by the Examiner. Accordingly, Applicants

respectfully traverse all of the art-based rejections set forth in the pending Office Action and respectfully request reconsideration and withdrawal of the rejections set forth therein. As all of the claims are now directed to allowable subject matter, Applicants respectfully request that the Examiner allow all of the pending claims and pass this case to issue.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

No fee is believed to be due for submission of this amendment. However, should any fees be required in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310.

Respectfully submitted,

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